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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,476	08/09/2001	Atsushi Kikugawa	010983	2643
23850	7590	05/28/2004	EXAMINER	
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP 1725 K STREET, NW SUITE 1000 WASHINGTON, DC 20006			OLTMANS, ANDREW L	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 05/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/924,476

Applicant(s)

KIKUGAWA ET AL.

Examiner

Andrew L Oltmans

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The amendment filed February 24, 2004 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The amendment amending the Example numbers constitutes new matter because the change of the scope of the examples originally filed in the application has been changed. The data presented in the application (including the experimental conditions for the examples) as originally filed provided that there were Examples 1-1 to 1-6. However, the newly amended specification states that the examples now only constitute Examples 1-4 to 1-6. There is no evidence found by the examiner, nor any evidence pointed to by applicant that establishes that the amendment changing Example 1-1 to Example 1-4 is merely a typographical error.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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NOTE: All references to locations in the reference refer either to the English language abstract or the English language translation provided.

Nichiuchi et al. Japanese Patent JP 2000-150216 A

3. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Nichiuchi et al. Japanese Patent JP 2000-150216 A (JP '216).

JP '216 teaches a permanent magnet comprising a rare earth metal-based permanent magnet (i.e. R-Fe-B) having a chemical film (i.e. a conversion coating) on the surface comprising phosphorus, oxygen, fluorine and at least one of titanium and zirconium, as recited in claims 1-2 and 5 (abstract; see also paragraph [0030]). JP '216 teaches that the magnet may be a Nd-Fe-B based permanent magnet, as recited in claim 6 (paragraph [0043]). JP '216 further teaches an embodiment wherein the thickness of the chemical film is from 0.01 - 1 μm , which is fully encompassed by the range of thickness recited in claim 4 (paragraph [0008]). JP '216 teaches that the chemical conversion film includes a rare earth metal and iron from the magnet surface, as recited in claim 1 and 3 (paragraph [0030]). JP '216 anticipates the claim 1 when component (a) is selected to be zirconium. The claims do not distinguish over the teachings of JP '216.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

NOTE: The following rejection under 35 USC 103 is applicable only to the members of the metal group defined as component (a) in claim 1 wherein the metal is molybdenum or tungsten.

Nichiuchi et al. Japanese Patent JP 2000-150216 A

5. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nichiuchi et al. Japanese Patent JP 2000-150216 A (JP '216).

JP '216 teaches as set forth above in paragraph 5. JP '216 further teaches that it is desirable to add additional components to the chemical bath used to treat the magnet surface, including oxidizers, such as tungstic acid, its salts, molybdenum acid and its salts (paragraph [0026]).

JP '216 fails to meet all the limitations of the instant claims in that JP '216 does not explicitly teach that molybdenum or tungsten are included in the conversion coating, as recited in claim 1.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the process steps and treatment composition taught by the reference (i.e. treating the surface of the rare-earth metal-based permanent magnet with a molybdenum or vanadium compound) are the same as the process steps and treatment composition taught in the instant specification (specification, page 8, last line to page 11, line 11) and therefore one of ordinary skill in the art would expect that the products resulting from the process taught by the reference would be the same as the product resulting

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from applicant's claimed process, including the product's inclusion of molybdenum or tungsten in the conversion coating.

"Where the claimed and prior art products are identical or substantially identical in structure or composition or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' In re Spada, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best 195 USPQ 430, 433 (CCPA 1977)." see MPEP 2112.01. [emphasis added by examiner]

Response to Arguments

6. Applicant's arguments filed March 10, 2003 have been fully considered but they are not persuasive. Claims 1-6 remain pending in this application. The rejections made in the previous Office Action under 35 USC 102 and 103 have been maintained.

7. The declaration of Fumiaki Kikui under 37 CFR 1.132 filed September 8, 2003 is insufficient to overcome the rejection of claims 1-6 based upon JP '216 as set forth in the last Office action because:

The experiment performed by declarant does not represent a comparison with the closest prior art. Although applicant argues that the aluminum is "necessary" for the formation of the chemical conversion coating, the presence or absence of aluminum is not relevant because aluminum in some form is not precluded from the claim language, as presently drafted. The teachings of JP '216 (paragraph [0030]) state that there is a conversion coating (i.e. a coating resulting from a reaction between the coating substance and the substrate magnet) on the surface of the magnet. It is further noted that the applicant is claiming a conversion coating (i.e. a product), and is not claiming the process. Therefore, the process to achieve the product is not a

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limitation in the claim. The test wherein there is no aluminum does not distinguish the claimed invention.

The explanation of the mechanism of the reaction of JP '216 provided by Mr. Kikui also is not persuasive because the explanation does not provide any evidence that any of the components of the chemical conversion coating are missing from the coating area described in paragraph [0030] of JP '216. The test data provided from the experiment does not support the explanation because the conditions in which the conversion coating in JP '216 is formed is different than the conditions in which the experiment was performed. The allegation that the zirconium is not present in the particular portion of JP '216's conversion coating is not sufficiently supported to establish that the teachings of JP '216 do not teach the claimed conversion coating, including each or rare earth element, zirconium and oxygen. There is no reason to believe that the chemical conversion coating recited in paragraph [0030] does not contain zirconium, which is explicitly recited as a portion of the "chemical conversion film" (see paragraph [0030], lines 1-2).

8. Applicant's arguments are all drawn to the proposition that paragraph [0030] of the JP '216 reference fails to teach the claimed "chemical conversion film". The examiner maintains, JP '216 teaches that the chemical conversion film includes a rare earth metal and iron from the magnet surface, as recited in claim 1 and 3 (paragraph [0030]) (see paragraph 7 of the Office Action mailed December 9, 2002). The non-mechanical translation further explains that "[f]urther, during chemical conversion, the phosphoric acid, compound phosphoric acid, and the like in the treatment solution *react with the materials of the magnet in the form of Nd and Fe* on the surface of the magnet forming a passive film" (paragraph [0030] of the non-mechanical

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translation-emphasis added). Paragraph [0030] unambiguously teaches that the passive conversion coating film contains the Nd and Fe *from the magnet*:

[0030] A chemical conversion film comprising constituent elements in the form of titanium and/or zirconium; phosphorus; oxygen; and fluorine that is formed by the above-described method is firmly bonded to the magnet through the aluminum layer. Thus, adequate resistance to corrosion is achieved so long as the film thickness is not less than 0.01 μm . Further, during chemical conversion, the phosphoric acid, compound phosphoric acid, and the like in the treatment solution react with the materials of the magnet in the form of Nd and Fe on the surface of the magnet, forming a passive film. Even when there is a portion in which the aluminum film has not been completely formed, there is thought to be compensation for resistance to corrosion in that portion. The maximum thickness of the chemical conversion film is not specifically limited. However, from the perspectives of reducing the size of the magnet and reducing the manufacturing cost, a thickness of not greater than 1 μm is desirable, with a thickness of not greater than 0.3 μm being preferred.

The evidence presented in the 132 declaration of Mr. Kikui was insufficient to overcome the teachings of JP '216, as set forth in paragraph [0030] of the translation. In view of all of the above, the arguments and evidence have not been found persuasive.

Conclusion

9. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under

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37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L Oltmans whose telephone number is 571-272-1248. The examiner can normally be reached from 7:00 to 3:30, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Andrew L. Oltmans

Patent Examiner

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